

Luminescence spectrometer for...

S/707/60/003/000/008/013  
B125/B102

(For figures see Cards 5/6 and 6/6)

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S/707/60/003/000/009/013  
B125/B102

AUTHORS: Akkerman, A. F., Gusika, P. L., Kaipov, D. K.

TITLE:  $\gamma$ -radiation applied to the detection of heavy element doping in a medium with small atomic number

SOURCE: : Akademiya nauk Kazakhskoy SSR. Institut yadernoy fiziki. Trudy. v. 3, 1960. Vzaimodeystviye vysokoenergetichnykh chastits s atomnymi yadrami, 124-130

TEXT: Possibilities are discussed of detecting heavy elements in ore-bearing rocks by a variant of the Monte Carlo method developed by the authors (Trudy Instituta yadernoy fiziki Akademii nauk Kazakhskoy SSR) for calculating the transmission of radiation through matter. 200 125-Mev  $\gamma$ -quanta ( $E \approx 2.447 \text{ m.e.v.}$ ) incident perpendicularly on two types of specimen, 10 cm thick, composed of a homogeneous aluminum lead mixture, one with a lead content of 5 and the other with one of 10 percent in weight, were studied by the authors. In addition, a "selection" of the partner (i.e. of the aluminum or the lead atom) was introduced into the calculating scheme. The probability for interaction with the aluminum

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$\gamma$ -radiation applied to the...

atoms in the mixture is given by  $P = \sigma_{Al} \cdot N_{Al} / (\sigma_{Al} \cdot N_{Al} + \sigma_{Pb} \cdot N_{Pb})$ , where  $\sigma_{Al}$  and  $\sigma_{Pb}$  are the total cross sections of the interactions with the aluminum and lead atoms;  $N_{Al}$  and  $N_{Pb}$  are the numbers of Al and Pb atoms per  $\text{cm}^3$  of the mixture. The results of the calculations are shown with others in Fig. 3 and Fig. 5. Photoabsorption occurs practically only on lead. With increasing lead concentration, the maxima of photoabsorption are shifted toward higher energies. At the same time the whole energy distribution changes. The share of the heavy element in the mixture becomes noticeable in certain sections of the spectrum of both forward and backscattered radiation and can be determined experimentally. This confirms the ideas of selective core sampling by  $\gamma$ -rays. In the range of relatively high concentrations the method of selective core sampling is of low efficiency owing to the small difference of the spectra of scattered radiation at a lead content of 5 % and 10 %. With increasing concentration of the heavy element doping, selective core sampling passes to impervious core sampling. Selective core sampling by  $\gamma$ -rays can be employed if the lead doping is less than 5 %, impervious core sampling if it is more than 5 %. The

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$\gamma$ -radiation applied to the...

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percentage of dopings in ore-bearing rocks cannot be evaluated precisely since the data hitherto available are insufficient. The ore content could, however, be estimated from the ratio of intensities in a definite section of the spectrum and from the shift of the maximum of photoabsorption on the energy scale. The doping percentage can be evaluated by selective core sampling with the use of a luminescence spectrometer. Ye. Akkoshkarov and F. A. Tulinova are thanked for their assistance in carrying out the calculations. There are 7 figures, 1 table, and 5 references: 4 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: C. C. Horton Rep. A.E.R. ERS/L3, 1953.

Legend to Fig. 3: Energy spectra of photoabsorbed  $\gamma$ -quanta: 1 - Al + 5% Pb; 2 - Al + 10 % Pb.

Legend to Fig. 5: Spectra of forward scattered  $\gamma$ -quanta for a mixture: 1 - Al + 5 % Pb; 2 - Al + 10 % Pb.

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20160

S/031/60/000/012/003/003  
A161/033

24.6720(1482, 1138, 1158)

AUTHORS: Akkerman, A.F.; Kaipov, D.K.; Shubnyy, Yu.K.

TITLE: Resonance Scattering of  $\gamma$ -Rays on  $\text{Ni}^{60}$

PDRIODICAL: Vestnik Akademii nauk Kazakhskoy SSR, 1960, No. 12, pp. 36 - 44

TEXT: The lifetime and spin of the first excitation state of  $\text{Ni}^{60}$  have been measured using the  $\gamma$ -rays resonance scattering method. The measuring results are given and the ways are indicated to raise the accuracy of the resonance scattering cross section determination, as well as for the possible study of beta decay. The increase of incident  $\gamma$ -rays energy to resonance energy was achieved by utilizing the nuclear recoil in preceding beta decay and gamma radiation. The  $\text{Co}^{60}$  decay system is considered (Fig. 1) and the energy of emitted  $\gamma_2$  quantum calculated by the formula

$$\cos\alpha + E_0 \frac{V_z}{c} \quad (3) \text{ where } V - \text{is} \quad E + E_0 - \frac{E_0^2}{2Mc^2} + E_0 \frac{V}{c} \cos\theta + E_0 \frac{V_{\gamma_2}}{c} \quad \checkmark$$

recoil nucleus velocity from  $\beta$ -radiation, directed at  $\theta$  angle to the escape direction of the  $\gamma_2$  - quantum;  $V$  - the velocity of the recoil nucleus from  $\gamma_1$  - quantum;  $V_z$  - the projection of thermal motion velocity on the  $\gamma_2$  direction;

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Resonance Scattering of  $\gamma$ -Rays on  $\text{Ni}^{50}$

S/031/60/000/012/003/003  
A161/A033

$\alpha$  - the angle between the escape directions of  $\gamma_1$  and  $\gamma_2$  quanta. (The thermal motion effect is not taken into account in the further calculations). Considering that the deceleration time in gases at atmospheric pressure is of the order  $10^{-10}$  -  $10^{-9}$  sec, the relation between the excited level lifetime  $\tau_\gamma$  and the resonance scattering cross section  $\sigma_{cp}$  is determined by the formula  $\tau_\gamma = \frac{2J^* + 1}{2J_0 + 1}$ .

$\frac{2.53}{E_0^2 \cdot \sigma_{cp}} \cdot \frac{N(E_p)}{N}$ , where  $\frac{N(E_p)}{N}$  is the  $\gamma$ -quanta fraction in the incident beam in the 1 eV range at energy  $E = E_{res}$  that is determined from the "microspectrum" of the incident radiation;  $\sigma_{cp}^{res}$  - the resonance scattering cross section;  $J_0$  - normal state spin of nucleus;  $J^*$  - excited state spin. The scintillation spectrometer used for  $\gamma$ - quanta recording is illustrated (Fig. 4). The source was  $\text{CoCl}_2$  of 2mCi activity. The ampule with dried  $\text{CoCl}_2$  was evacuated to  $10^{-2}$  mm Hg, sealed and placed into a steel container which was heated to  $1050^\circ\text{C}$ , so that all  $\text{CoCl}_2$  turned into gas. A lead block 70 mm in diameter and 200 mm length protected the detector from direct hits of  $\gamma$ -quanta, and it recorded quanta scattered from a round nickel scatterer;  $\gamma$ -radiation was detected by a NaI (Tl) crystal of 30 mm diameter and 40 mm height, connected to an  $\Phi\text{BY} 69$  (FEU-29). The lifetime calculated with the formula (5) for 1330 keV level for  $\text{Ni}^{50}$  was  $\tau_\gamma = (1.24 \pm 0.28) \cdot 10^{-12}$  sec, or about 5 times shorter of single-particle transi-

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S/031/60/000/012/003/003  
1161/A033

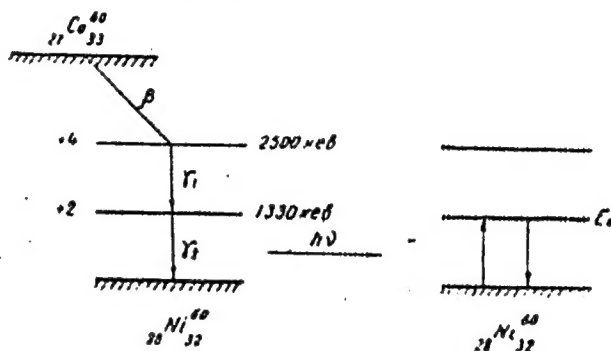
Resonance Scattering of  $\gamma$ -Rays on  $Ni^{60}$

tion lifetime (Ref. 2) (Adler, A. Bohr, M. Huls, B. Mottelson, A. Winther. Rev. Mod. Phys., 28, 432 (1956)). The first excitation level spin of  $Ni^{60}$  was determined to be equal 2. The formula is only roughly approximate, and though the lifetime determined in the experiment tallies with the data of (Ref. 5) (P.R. Naberger. Phys. Rev. 103, 983, 1956) the lifetime determination accuracy is  $\sim 20\%$ , as in (Ref. 5). Student-diplomant E. Vil'kovskiy of the Kazakhskaya SSR State University participated in the calculations. There are 7 figures and 3 references of which 7 are Soviet and 2 English.

Схема распада  $Co^{60}$

Figure 1:

Excitation of the  $Ni^{60}$  nucleus by gamma



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# Resonance Scattering of $\gamma$ -Rays on $\text{Ni}^{60}$

Figure 2: "Microspectrum" of incident radiation taking into account chemical bonds

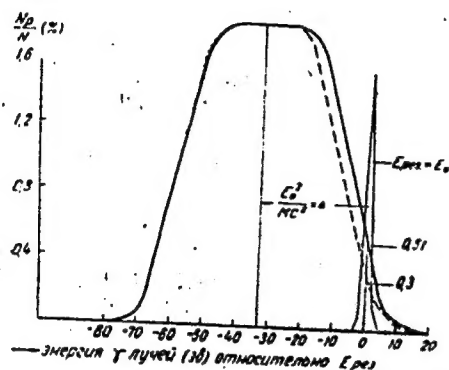


Рис. 2. «Микроспектр» падающего излучения с учетом химических связей.

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Figure 4: Layout of experimental installation.

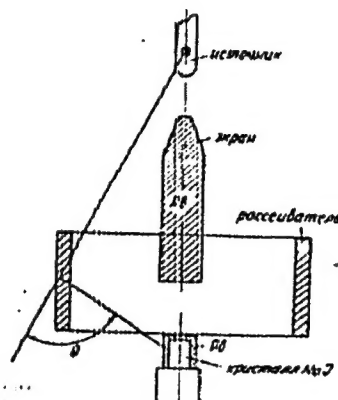


Рис. 4. Схема экспериментальной установки.



84970

24.6100

S/056/60/039/003/056/058/XX  
B006/B070

AUTHORS: Kaipov, D. K., Shubnyy, Yu. K.

TITLE: The Effect of Collisions<sup>19</sup> of Recoil Nuclei Upon the  
Resonance Scattering Cross Section of Gamma Rays by Ni<sup>60</sup>  
Nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,  
Vol. 39, No. 3(9), pp. 888 - 889

TEXT: In the present "Letter to the Editor", the authors report on  
their investigations of the resonance scattering of 1330-kev gamma rays  
by Ni<sup>60</sup> nuclei with gaseous and liquid Co<sup>60</sup> sources (in the form of  
CoCl<sub>2</sub>). In an earlier paper (Ref.3), the authors had obtained a value of  
(17.1±3).10<sup>-27</sup> cm<sup>2</sup> for the resonance scattering cross section. This cross  
section is very sensitive to the source medium density and the lifetime  
 $\tau_\gamma$  of the level investigated. In a hydrochloric acid solution of CoCl<sub>2</sub>  
(~ 40 millicuries),  $\tau_\gamma$  was found to be  $(1.14 \pm 0.37) \cdot 10^{-12}$  sec, which

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The Effect of Collisions of Recoil Nuclei Upon the Resonance Scattering Cross Section of Gamma Rays by  $Ni^{60}$  Nuclei S/056/60/039/003/056/058/XX  
B006/B070

agrees well with the results of other authors. The resonance scattering cross section for the liquid source was found to be  $(1.73 \pm 0.2) \cdot 10^{-27} \text{ cm}^2$ . There exists a relation  $\bar{\sigma} = (1/2\tau_\gamma) \sigma_0 \pi h P(E_p)$ , between  $\tau_\gamma$  and the mean resonance scattering cross section  $\bar{\sigma}$ ,  $P(E_p)$  being the energy distribution of the  $\gamma$  quanta. The slowing down of the recoil nuclei is taken into account by introducing the factor  $1 - \exp(-l/v\tau_\gamma)$  into this relation, where  $v$  is the velocity of the recoil nucleus and  $l$  the path length of this nucleus before collision. For a gaseous source, the factor is practically equal to one. With this, the ratio of the average resonance scattering cross sections for the gaseous source ( $\bar{\sigma}_1$ ) and the liquid source ( $\bar{\sigma}_2$ ) is found to be  $\bar{\sigma}_1/\bar{\sigma}_2 = [1 - \exp(-l/v\tau_\gamma)]^{-1}$ . With  $\tau_\gamma = (1.1 \pm 0.1) \cdot 10^{-12} \text{ sec}$  and  $v = 7.2 \cdot 10^5 \text{ cm/sec}$ ,  $l = 8 \cdot 10^{-8} \text{ cm}$  since  $\bar{\sigma}_1/\bar{\sigma}_2 = 9.9$ . The authors thank O. Suvarev for participation in the

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22616

S/089/61/010/004/019/027  
B102/B205

26.2246

AUTHORS: Akkerman, A. F., Kaipov, D. K.

TITLE: Monte Carlo calculation of the passage of gamma rays from a plane oriented  $\text{Cs}^{137}$  source through aluminum under conditions corresponding to barrier geometry

PERIODICAL: Atomnaya energiya, v. 10, no. 4, 1961, 391-392

TEXT: The method of polynomial expansion by L. Spencer and U. Fano (Res. Nat. Bur. Standards, 46, 446 (1951)) is extensively used to solve the transport equation for gamma quanta. The very difficult computations can be simplified by a straightforward relation suggested by Roys et al. (Phys. Rev. 95, 911 (1954)) for the growth factor:

$$B = A_1 \exp(-\alpha_1 \mu_0 z) + A_2 \exp(-\alpha_2 \mu_0 z) \quad (1),$$

where  $\mu_0$  symbolizes the linear attenuation factor of gamma radiation in matter. However, experiments have shown that growth factors calculated from Eq. (1) were much greater than the actual values. This finding is related to the fact that the theory is based on the assumption of an

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Monte Carlo calculation...

S/089/61/010/004/019/027  
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infinitely large scattering medium (energy flux from all sides), whereas barrier geometry is employed in practice (energy flux from one side). The influence of the geometry is the greater the weaker the source, viz., the greater the penetration depth of radiation. The Monte Carlo method has now been used to verify what has been said above and to obtain suitable relations for the growth factors. A study has been made of the passage of gamma rays from a plane  $\text{Cs}^{137}$  source through aluminum under conditions corresponding to barrier geometry. The source was oriented such that the angle of incidence was zero. The method of calculation was chosen according to Ref. 7. The great advantage of this method is its high degree of accuracy (9.5 % in this case). Agreement with the experiment was found to be good. The energy growth factor proved to be virtually a linear function of the penetration depth  $z$ . Fig. 3 shows the dose growth factor  $B_D$  as calculated from the formula

$$B_D = \left[ \sum_{i=1}^{20} \mu_e(E_i) I(E_i) \right] / \left[ \mu_e(E_0) I(E_0) \right] + 1,$$

where  $\mu_e(E_i)$  indicates the absorption coefficient of gamma quanta of energy

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Monte Carlo calculation...

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$E_i$  in air,  $I(E_i)$  the energy flux of scattered radiation in the  $i$ -th interval after passing through a material layer of thickness  $z$ ,  $I(E_0)$  the energy flux of non-scattered radiation at the same depth. It is seen that the growth factor calculated from Eq. (1) (curve 2) differs considerably from the experimental values, whilst the one calculated from the formula given here (curve 1) agrees well with the experiment. N. S. Shteyn, K. S. Yakovlev, and Yu. G. Kosyak are thanked for assistance. There are 4 figures and 11 references: 7 Soviet-bloc and 4 non-Soviet-bloc. The three references to English-language publications read as follows: Ref. 7: M. Berger. J. Res. Nat. Bur. Standards, 55, 343, (1955); Ref. 9: F. Perkins. J. Appl. Phys. 26, 1372 (1955); Ref. 10: F. Kirm et al. Radiology, 63, 94 (1955).

SUBMITTED: October 17, 1960

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22616

AKKERMAN, A.F.; KAIPOV, D.K.; SHUBNYY, Yu.K.

Resonant scattering of gamma rays on  $\text{Te}^{124}$  nuclei. Zhur. eksp.  
i teor. fiz. 40 no.4:1031-1032 Ap '61. (MIRA 14:7)

1. Institut yadernoy fiziki AN Kazakhskoy SSR.  
(Gamma rays--Scattering) (Tellurium--Isotopes)

S/707/62/005/000/010/014  
D290/D308

AUTHORS: Aekerman, A.F., Vil'kovitskiy, E.Ya. and Kaipov, D.K.

TITLE: Doppler broadening of  $\gamma$ -line in gases

SOURCE: Akademiya nauk Kazakhskoy SSR. Institut yadernoy fiziki. Trudy, v. 5. Alma-Ata, 1962. Fizika chastits vysokikh energii. Struktura yadra, 120-134

TEXT: The authors studied the effect of various factors on the  $\gamma$ -ray microspectra of gaseous sources; these effects are important in resonant scattering experiments with  $\gamma$ -rays. The structure of the microspectrum depends on the Doppler energy shifts of the  $\gamma$ -quanta due to recoils from previous nuclear processes. The authors calculated the separate effects for a preceding  $\beta$ -disintegration, K-capture, and  $\gamma$ -transition, and then combined the results by means of probability theory to find the total effect for two typical disintegration schemes; the method can be applied to more complex and to branched disintegration schemes. The method was used to calculate the microspectrum of the  $\beta$ -decay of  $^{60}\text{Co}$  to  $^{60}\text{Ni}$ . The auth- ✓

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Doppler broadening of ...

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ors also studied the effect of thermal motion, chemical shifts, and atomic collisions on the microspectrum. The Doppler shift due to thermal motion was calculated assuming a Maxwellian velocity distribution for the gas molecules; the effect was only appreciable at the edges of the spectrum even at 1500°C. The chemical shift effect is difficult to calculate except in the simplest cases; a rough approximation is given by subtracting the energy of the shift from the recoil energy. The effect of atomic collisions was calculated on the assumption that association is negligible in the gas; that the molecular interactions are elastic, isotropic in the center-of-mass system, and their cross-section is independent of energy; and that the preceding  $\gamma$ -transitions have much shorter lifetimes than the resonant level. The resonant scattering cross-section for  $^{74}\text{Ge}$  was calculated as a function of the density of the  $^{74}\text{As}$  source; the results agree well with experiment. There are 5 figures.

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S/707/62/005/000/011/014  
D290/D308

AUTHORS: Gorbunov, A.N., Kaipov, D.K. and Kuvatov, K.G.  
TITLE: Photodisintegration of neon nuclei  
SOURCE: Akademiya nauk Kazakhskoy SSR. Institut yadernoy fiziki. Trudy, v. 5. Alma-Ata, 1962. Fizika chastits vysokikh energiy. Struktura yadra, 135-146

TEXT: The authors studied the photodisintegration of neon nuclei for photon energies up to 70 Mev; they used a cloud-chamber that contained neon and that was placed in a magnetic field of 10,510 gauss. They measured the relation between the effective cross-section of the ( $\gamma$ p) reaction and the photon energy  $E_p$ ; the maximum cross-section ( $11.48 \pm 0.81$  mbarn) occurs for  $E_p = 18-20$  Mev, which indicates that the  $^{19}\text{F}$  nucleus is formed in an excited state. The yields and cross-sections of various types of reaction were measured; the integral absorption cross-section is  $0.588 \pm 0.0085$  barn-Mev. The value of  $\sigma_b$  ( $\sigma_b = \frac{\sigma(E)}{E} dE$ ) is  $17.58 \pm 0.25$  mbarn; this

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Photodisintegration of neon nuclei

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agrees well with the value calculated for electric dipole absorption using the independent particle model of the nucleus. The root-mean-square radius of charge distribution  $R_c$  for the neon nucleus ( $R_c = 2.529 \times 10^{-13}$  cm) and the nuclear unit radius  $r_0$  ( $r_0 = 1.183 \times 10^{-13}$  cm) were calculated from  $\sigma_b$ . The polarizability of nuclear matter  $\sigma_{-2}$  was calculated ( $\sigma_{-2} = 0.619$  mbarn/Mev); this value agrees well with the theoretical value found using the collective model of the nucleus. The proton angular distributions were measured for the  $(\gamma p)$ ,  $(\gamma pn)$ , and  $(\gamma p\alpha)$  reactions; the results confirm the direct dipole absorption of  $\gamma$ -quanta by separate nucleons. The proton angular distribution for the  $(\gamma pn)$  reaction is isotropic for  $E_\gamma < 5$  Mev, but strongly favors the forward direction for  $E_\gamma > 5$  Mev; this may indicate that quasi-deuteronic absorption occurs at high energies. The most important English-language reference reads as follows: Levinger, J.S., Bethe, H.A., Phys. Rev., 78, 115, 1950. There are 8 figures and 3 tables.

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41143

S/120/62/000/005/025/036  
E192/E382

9.4/60

AUTHORS: Kaipov, D.K., Kozhaspayev, N. and Pavlov, A.F.

TITLE: Stabilization of the gain of photomultipliers

PERIODICAL: Pribery i tekhnika eksperimenta, no. 5, 1962,  
151 - 153

TEXT: The stabilization system is suitable for spectro-  
metric and time-resolving photomultipliers and is based on  
adjusting their supply voltage as a function of a control  
signal produced by a coincidence circuit. The stabilization system  
is illustrated in Fig. 1. The amplifier, based on tube  $\Pi_1$

( $\Pi_1 = T_1$ ), has a gain of about 10 and the pulses to this  
amplifier are fed either from the anode or the dynode of the  
photomultiplier. The amplifier is stabilized by a strong  
negative feedback. The coincidence circuit, based on  $T_2$ , is also  
very stable and its pedestal is low. One of the inputs of the co-  
incidence circuit receives a pulse from the univibrator based on  
 $T_{10}$ . After passing through the circuit, it is applied

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Stabilization of ....

S/120/62/000/005/025/036  
E192/E382

to the amplitude-detector  $T_3$ , whose time constant  $R_{16}C_5$  is matched with the time constant of the high-voltage rectifier. This is followed by a cathode-follower  $T_4$ . A vibrating relay  $PI-5$  is used as a voltage-chopper, the reference-voltage level being provided by a divider  $R_{18}/R_{19}$ . The reference voltage is derived from a 75-V stabilizer tube  $T_8$ , which is first stabilized by  $T_9$  (see Fig. 1). The low-frequency amplifier, based on  $T_5$ ,  $T_6$  and  $T_7$ , produces a signal which is applied to the phase-detector, which determines the sign of the difference and produces a direct voltage proportional to the difference between the direct component of the detected pulse voltage due to the standard sparks and the reference source. The phase-detector is coupled to the rectifier and connected in series with the source of the reference voltage. These two are then connected into the grid circuit of the first tube of the DC amplifier. The phase-detector produces a maximum output of

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S/056/62/043/003/011/C63  
B125/B102

AUTHORS: Kaipov, D. K., Shubnyy, Yu. K., Begzhanov, R. B., Islamov,  
A. A.

TITLE: Resonance scattering of  $\gamma$ -quanta from  $\text{Sn}^{116}$  nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,  
no. 3(9), 1962, 808-812

TEXT: The method of resonance scattering was applied to 1290-kev  $\gamma$  quanta from the  $\text{Sn}^{116}$  nuclei of a gaseous  $\text{In}^{116}\text{mCl}_3$  source (Fig. 1) to determine the lifetime of the first excited 1.29-Mev level. A similar value is obtained by the method of Coulomb excitation. The  $\text{InCl}_3$  produced from enriched metallic indium was sublimated into a quartz ampoule, which was then evacuated and subjected for 1 hr to the thermal neutron flux ( $\sim 10^{13}$ ) of a BBP-C (VVR-S) reactor. Following this it was heated to 500-550°C for 1 to 2 hrs so that  $\text{InCl}_3$  sublimed ( $\sim 0.7$  atm). The  $\gamma$ -quantum scattering was measured by two symmetrically arranged scintillation

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value agrees with that obtained from the Coulomb excitations. The considerable divergence between the lifetimes found by the two methods

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S/056/62/043/003/011/063  
B125/B102


Resonance scattering of ...

is due to the effect of the chemical bonds in the molecule on the energy distribution of the  $\gamma$ -quanta. The E2-transition with  $E_\gamma = 1290$  kev (solid source) is an accelerated transition with the acceleration factor 10.5. There are 5 figures.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute of Nuclear Physics of the Academy of Sciences Kazakhskaya SSR). Institut yadernoy fiziki Akademii nauk Uzbekskoy SSR (Institute of Nuclear Physics of the Academy of Sciences Uzbekskaya SSR)

SUBMITTED: April 19, 1962

Fig. 1. Schematic drawing of the experimental arrangement.  
Legend to Fig. 1: (1) source; (2) electric furnace; (3), (4) Sn and Cd absorber (in experiments with self-absorption); (5) lead cone; (6), (9) Sn and Cd scatterer; (7) NaJ (Tl) crystal, (8) photomultiplier.

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B/056/62/043/004/021/061  
B102/B100

AUTHORS: Akkerman, A. F., Vil'kovskiy, E. Ya., Kaipov, D. K.,  
Chekanov, V. N.

TITLE: Resonance scattering method of measuring the lifetime of the  
4<sup>+</sup> level (1282 keV) of the Cd<sup>114</sup> nucleus

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,  
no. 4(10), 1962, 1268 - 1271

✓

TEXT: The dependence of the resonance scattering cross section on the source density was investigated with six InCl<sub>3</sub> vapor specimens in quartz ampoules enclosed in stainless steel containers, with heating from 500°C to 800°C to vary the density. Each ampoule had an In<sup>114</sup> activity of 10 millicuries. That the whole CdCl<sub>2</sub> molecule undergoes the recoil due to gamma emission in the K-capture, without any destruction of bonds, was confirmed by a special self-absorption experiment. 
$$q = \frac{ndgh^2\epsilon\Gamma}{4(\pi(\Delta_n^2 + \Delta_p^2))^{1/2}E_0^2} \cdot (2). \quad (2)$$
 The relative weakening of the resonance effect as a result of additional

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Resonance scattering method ...

S/056/62/043/004/021/061  
B102/B100

scattering in a thin resonance absorber, was measured.  $\Gamma$  is the level width, which is independent of the state of the source molecule,  $n$  the number of atoms per  $\text{cm}^3$  Cd,  $d$  the mean effective scatterer thickness,  $\Delta_n$ ,  $\Delta_s$  are the Doppler widths due to the thermal motion of the absorber and scatterer atoms respectively,  $E$  is the transition energy and  $g$  the spin factor. From  $\Gamma = (4.26 \pm 1.47) \cdot 10^{-2}$  eV the mean lifetime of the 557-keV  $2^+$  level of the  $\text{Cd}^{114}$  nucleus was calculated as  $\tau_1 = (1.5 \pm 0.53) \cdot 10^{-11}$  sec.  $\tau_2$  the lifetime of the 1282-keV  $4^+$  level was calculated from the experimental curves  $P(E_p) = G[\tau_1, \tau_2, \lambda(\rho, d)]$ , where  $P$  is the number of  $\gamma$ -quanta per eV near  $E_p$ ,  $\lambda$  is the mean free path of the  $\text{InCl}_3$  molecules in a medium of density  $\rho$  and collision parameter  $d$ :  $\tau_2 = (7.5^{+1.2}_{-2.6}) \cdot 10^{-12}$  sec. The theoretical  $\tau_2$  values are highly dependent on the model used, but are always below  $7.5 \cdot 10^{-12}$  sec. A model which takes account of nucleon pair interaction and collective interaction with the surface (Phys. Rev. 114, 1116, 1959) gives the best approach. There are 3 figures.

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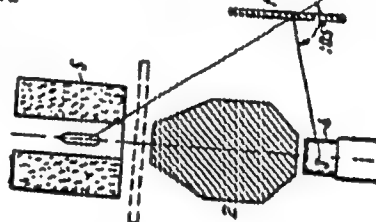
Resonance scattering method ...

S/056/62/043/004/021/061  
B102/B180

ASSOCIATION: Institut yadernoy fiziki Akndomii nauk Kazakhskoy SSR  
(Institute of Nuclear Physics of the Academy of Sciences of  
the Kazakhskaya SSR)

SUBMITTED: May 29, 1962

Fig. 2. Experimental arrangement. (1) Cylindrical scatterer, (2) shield-  
ing lead cone, (3) detector, a NaI(Tl) crystal  
with  $\Phi\text{EY-11}$  (FEU-11) photomultiplier, whose  
pulses were fed to an A3-1 (AZ-1) single-  
channel pulse-height analyzer; (4) 1.5 mm Pb  
shield; (5) furnace with source.



$\rho$ , mg/cm <sup>3</sup>	3.85	9.57	21.22	24.55	63.71	233.84
$\sigma$ , mb	$246 \pm 22.3$	$232.6 \pm 21$	$224 \pm 21.4$	$210.9 \pm 27.6$	$168 \pm 18.5$	$85.3 \pm 19.8$

Card 3/3

5/120/63/000/001/012/072  
E032/E314

AUTHORS: Batalin, S.S., Kaipov, D.K. and Chekanov, V.N.  
TITLE: A fast coincidence circuit for slow scintillators  
PERIODICAL: Pribery i tekhnika eksperimenta, no. 1, 1963,  
61 - 63

TEXT: The authors report a fast coincidence circuit designed for use with a "fast-slow" system for amplitude-analysis of selected spectral regions. The phosphors are NaI(Tl) and the photomultipliers are  $\Phi\gamma$ (FEU)-13. A block diagram of the device is shown in Fig. 1. The fast coincidence circuit is shown in Fig. 2. The values of the components in the lower part of this figure are the same as in the upper part. The overall resolution obtained with Co<sup>60</sup>  $\gamma$ -rays was found to be 6 ns at 100% efficiency. There are 5 figures.

ASSOCIATION: Institut yadernoy fiziki AN KazSSR (Institute of Nuclear Physics of the AS KazSSR)

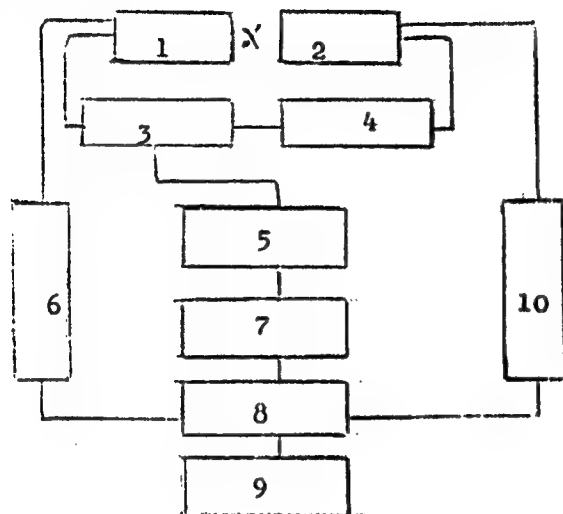
SUBMITTED: April 10, 1962

Card 1/3

A fast coincidence circuit ....

S/120/63/000/001/012/072  
EO32/E314

Fig. 1:



- Key:
- 1 - Probe 1;
  - 2 - Probe 2;
  - 3 - Fast coincidence circuit;
  - 4 - Delay line;
  - 5 - Integral discriminator;
  - 6 - Kicksorter;
  - 7 - 1 ms delay line;
  - 8 - Triple coincidence circuit;
  - 9 - Scaler;
  - 10 - Kicksorter.

Card 2/3



KAIPOV, D.K.; PERTSEV, A.N.

Electric quadrupole transitions in nuclei. Trudy Inst. iad. fiz.  
AN Kazakh. SSR 6:71-78 '63.

Fast-slow scheme of coincidences with stabilization. (79-89)  
(MIRA 16:10)

ACCESSION NR: AR4022436

S/0058/64/000/001/A029/A029

SOURCE: RZh. Fizika, Abs. 1A274

AUTHOR: Kaipov, D. K.; Pavlov, A. F.

TITLE: Fast-slow coincidence circuit with stabilization

CITED SOURCE: Tr. In-ta yadern. fiz. AN KazSSR, v. 6, 1963, 79-89

TOPIC TAGS: coincidence circuit, fast slow coincidence circuit, coincidence circuit with stabilization, stabilized coincidence circuit, Gamma resonance scattering, resolution time, pulse height analyzer, stabilization coefficient

TRANSLATION: A fast-slow coincidence recording unit is described, especially developed for experiments on resonance scattering of gamma quanta by nuclei, in which a small resolution time is required. The installation consists of two scintillation transmitters, a fast

Card 1/2

ACCESSION NR: AR4022436

coincidence circuit, an amplifier, a discriminator, two analyzers, a slow coincidence circuit, and a mechanical counter. The equipment employs FEU-33 photomultipliers with stilbene crystals. The fast coincidence circuit is a classical current circuit with resolution time  $2.9 \times 10^{-9}$  sec. The analyzers are constructed in accordance with the principle of the AADO commercial pulse-height differential analyzer. A special circuit is used to stabilize the photomultiplier gain. The stabilization coefficient of the circuit reaches several hundred. The installation was checked for stability by measuring the number of coincidences of gamma quanta emitted by a  $\text{Co}^{60}$  source. The reproducibility of the data is satisfactory. The instability in the number of coincidences did not exceed 1% in 11 hours of continuous operation. L. I.

DATE ACQ: 03Mar64

SUB CODE: PH, SD

ENCL: 00

Card 2/2

BEGZHANOV, R.B.; KAIPOV, D.K.; SHUBNYY, Yu.K.; ISLANOV, A.A.

Lifetime of the 1.29 Mev. level in  $\text{Sn}^{116}$ . Izv. AN Uz.SSR. Ser.  
fiz.-mat. nauk 7 no.5:45-50 '63. (MIRA 17:8)

1. Institut yadernoy fiziki AN UzSSR.



L 17128-63 EWT(π)/BDS AFFTC/ASD  
ACCESSION NR: AP3000220

S/0166/63/000/002/0049/0055

AUTHORS: Begzhanov, R. B.; Islamov, A. A.; Kainov, D. K.; Shubnyy, Yu. K.

TITLE: Determining the half-life of  $Fe^{56}$  nucleus

SOURCE: AN UzSSR. Izv. Seriya fiziko-matem. nauk, no. 2, 1963, 49-55

TOPIC TAGS: resonant scattering, half-life, decay, gaseous source

ABSTRACT: The method of resonant scattering was used to determine the half-life of the first excitation state of  $Fe^{56}$  at 0.845 MeV energy level. The compound  $MnCl_2$  was used as the gaseous source scatterer (with  $Mn^{56}$  half-life of 2.56 hrs). To measure self-absorption with good accuracy the experiment was set up in both plane and curved scattering geometries. Compared to a solid Cu-scatterer an increase in count was obtained from the gaseous scatterer. This increase was 10-12% for the curved geometry and 18-20% for the plane case. Moreover, the plane geometry provided a better screening of nonresonant scattering in the energy range 0.785-0.955 MeV. The half-life thus determined was  $(9.6 \pm 1.0) \cdot 10^{-12}$  seconds. Orig. art. has 5 figures, 2 formulas, and 2 tables.

ASSN: Institute of Nuclear Physics, Academy of Sciences, Uzbek SSR.

Card 1/1

S/056/63/044/001/026/067  
B104/B144

AUTHORS: Begzhanov, R. B., Islamov, A. A., Kaipov, D. K.,  
Shubnyy, Yu. K.

TITLE: Lifetime of the 0.845 Mev level of the  $\text{Fe}^{56}$  nucleus

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44,  
no. 1, 1963, 137-141

TEXT: Resonance scattering of  $\gamma$ -quanta on the 0.845 Mev level of  $\text{Fe}^{56}$  is investigated using a ring and a plane scatterer and a self-absorption method with a gaseous  $\text{MnCl}_2$  source ( $T_{1/2}$  of  $\text{Mn}^{56}$  being 2.56 hrs). To determine the lifetime the mean cross section of resonance scattering was measured, and the energy distribution of the  $\gamma$ -quanta emitted was calculated theoretically. The annular Fe scatterer was of 37.5 cm in diameter, 13.5 cm high and 0.9 cm thick. The plane scatterer was a plate (30-30.1 cm), the mean scattering angle was  $104^\circ$ . The plane scatterer gave better screening of the source than the ring scatterer, and this considerably reduced the non-resonance scattering in the energy range of 0.785-0.955 Mev. To reduce the effect of Compton quanta, the

Card 1/2

Lifetime of the 0.845 Mev level ...

S/056/63/044/001/026/067  
B104/B144

crystals were surrounded by a filter (3.5 mm Pb + 1 mm Cd). The  $Mn^{56}Cl_2$  source was produced by several hours' irradiation of 2 mg  $Mn^{55}Cl_2$  in the reactor of IYAF AN UzSSR with a neutron flux of  $1.8 \cdot 10^{13} \text{ cm}^{-2} \cdot \text{sec}^{-1}$ . A lifetime of  $(9.6 \pm 1.8) \cdot 10^{-12} \text{ sec}$  is obtained for the first excited level of the  $Fe^{56}$  nucleus. This is 1/15 of the value determined by the Weisskopf single-particle model. There are 5 figures and 2 tables.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Uzbekskoy SSR (Institute of Nuclear Physics of the Academy of Sciences Uzbekskaya SSR); Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute of Nuclear Physics of the Academy of Sciences Kazakhskaya SSR)

SUBMITTED: August 19, 1962 (initially)  
September 26, 1962 (after revision)

Card 2/2

L 13624-63 EWT(m)/BDS AFFTC/ASD  
ACCESSION NR: AP3003102

8/0056/63/044/005/1811/1817

AUTHOR: Kaipov, D. K.; Begzhanov, R. B.; Kuz'minov, A. V.; Shubnyy, Ya. I.

TITLE: Resonance scattering of Gamma quanta on Cu-65 and Ti-46

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 1811-1817

TOPIC TAGS: excited state lifetime, nuclear resonance scattering, copper-65, titanium-46

ABSTRACT: The lifetimes of the excited states of Cu-65 and Ti-46 nuclei, at 1.114 and 0.890 MeV, respectively, were measured by nuclear resonance scattering, using gaseous sources of Ni-65 and Sc-46 in NiCl sub 2 and NiCl sub 3. The NiCl sub 2 was prepared from nickel enriched to 77.8% Ni-69 and irradiated in a neutron flux of 1.8 times 10 sup 13 per sq. cm. sec in the reactor of the Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics, AN UzSSSR).

The Ni-65 and Sc-46 activities were approximately 20 millicurie. The scattered photons were detected with a NaJ(Tl) crystal combined with a photomultiplier. The energy distributions of the photons were calculated from the Ni-65 and Sc-46 decay schemes, assuming that the recoil nucleus is free and that there are no Beta-Gamma correlations. The lifetimes were found to be (1.42 plus or minus 0.20) Card 1/2

L 13624-63

ACCESSION NR: AP3003102

times 10 sup - 11 sec for the 0.890-MeV level of Ti-46 and (5.5 plus or minus 1.6) times 10 sup - 13 sec for the 1.114 MeV level of Cu-65. The latter corresponds to an excited-nucleus lifetime of 8.3 times 10 sup - 13 sec for the M1 transition and to an E2/M1 intensity ratio equal to 0.32. "The authors wish to thank A. A. Islamov for assistance with the measurements." Orig. art. has: 7 formulas, 2 figures, and 2 tables.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Nuclear Physics Institute, Academy of Sciences, Kazakh SSR)

SUBMITTED: 09Jan63

DATE ACQ: 23Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 003

OTHER: 016

2/2

Card

L 19648-63 ENT(m)/EDS AFPTC/ASD  
ACCESSION NR: AP3007059

S/0056/63/045/003/0443/0447

AUTHORS: Kaipov, D. K.; Shubny\*y, Yu. K.; Kosyak, Yu. G.; Begzhanov, R. B..

19  
TITLE: Resonance scattering of gamma rays from liquid and solid sources on Sn-116 and Cu-65 nuclei

SOURCE: Zh. eksper. i teoret. fiziki, v. 45, no. 3, 1963, 443-447

TOPIC TAGS: gamma ray, resonance scattering, liquid source, solid source, Ir-116, Ni-65, Sn-116, Cu-65

ABSTRACT: The reduction in the resonance scattering of 1.29 and 1.14 MeV gamma quanta by  $\text{Sn}^{116}$  and  $\text{Cu}^{65}$  nuclei was found to be 0.055 and 0.040 when liquid sources of  $\text{In}^{115\text{m}}$  and  $\text{Ni}^{65}$  are used and 0.050 and 0.024 when solid sources are used. The study of the attenuation effect in liquid and solid sources, as distinguished from the gaseous sources hitherto used, can lead to conclusions about the mole-

Card 1/4

L 19648-63

ACCESSION NR: AP3007059

cular interactions in the source material and can also yield the lifetimes of the high-lying excited states. Various models for the interaction of the recoil nuclei with the surrounding atoms of the source material are discussed. The results obtained for Sn-116 and Cu-65 are found to agree with data from other work. Orig. art. has 3 figures, 5 formulas, and 1 table.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Nuc. Phys. Inst. Acad. Sci. Kazakh SSR); Institut yadernoy fiziki Akademii nauk Uzbekskoy SSR (Nuc. Phys. Inst. Acad. Sci. Uzbek SSR)

SUBMITTED: 15Mar63

DATE ACQ: 08Oct63

ENCL: 02

SUB CODE: PH

NO REF SOV: 002

OTHER: 006

Card 2/4

ACCESSION NR: AP4042362

S/0056/64/047/001/0016/0020

AUTHORS: Shubny<sup>\*</sup>y, Yu. K.; Kaipov, D. K.; Begzhanov, R. B.

TITLE: Resonance scattering of gamma quanta by the nuclei As-75, Sb-123, and Re-187

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 1, 1964, 16-20

TOPIC TAGS: arsenic, antimony, rhenium, radioactive isotope, excited state, emission linewidth, gamma scattering, resonance scattering

ABSTRACT: The nuclear scattering method was used to determine the lifetimes of the excited states of As<sup>75</sup>, Sb<sup>123</sup>, and Re<sup>187</sup> with energies 0.265, 0.161, and 0.686 MeV, respectively. The sources were the radioactive isotopes Ge<sup>75</sup>, Sn<sup>123</sup>, and W<sup>187</sup>. The use of solid sources for some measurements made the time between collisions of the recoil nuclei with the surrounding atoms much shorter than the life-

Card 1/3

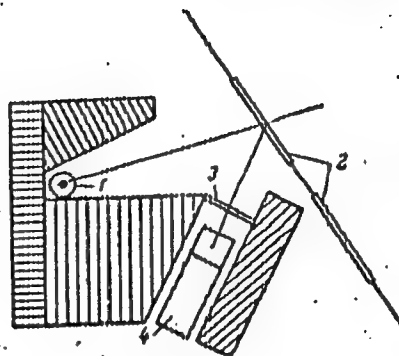


ACCESSION NR: AP4042362

ENCLOSURE: 01

Diagram of experimental set-up:

- 1 - electric oven with source  
( $\text{Ge}^{75}$  or  $\text{W}^{187}$ )
- 2 - scatterers
- 3 - lead or copper absorber ( $\text{Sn}^{123}$ )
- 4 - FEU-12B photomultiplier with  
 $\text{NaI(Tl)}$  crystal



Card 3/3

17/0046/65/044/005/1221/1225

**"APPROVED FOR RELEASE: 08/10/2001**

**CIA-RDP86-00513R000619920015-8**

**APPROVED FOR RELEASE: 08/10/2001**

**CIA-RDP86-00513R000619920015-8"**

KAIPOV, D.K.; SHUBINYY, Yu.K.; AMERDAYEV, V.M.; KAZANGAPOV, A.; KOSYAK, Yu.G.

Resonance scattering of gamma quanta by  $Mg^{24}$  nuclei. Zhur. eksp.  
i teor. fiz. 48 no.5:1221-1223 May '65. (MIPA 18:7)

1. Institut yadernoy fiziki AN Kazakhskoy SSR.

L 38207-66 EWT(m)

ACC NR: AP6022034

SOURCE CODE: UR/0120/66/000/003/0209/0210

AUTHOR: Zhetbayev, A. K.; Kaipov, D. K.; Smirin, L. N.; Tyshchenko, A. P. 33

ORG: Institute of Nuclear Physics, AN KazSSR, Alma-Ata (Institut yadernoy fiziki AN KazSSR) B

TITLE: Cell for electrodeposition of radioactive isotopes 19

SOURCE: Priory i tekhnika eksperimenta, no. 3, 1966, 209-210

TOPIC TAGS: electrodeposition, isotope, radioactive isotope

ABSTRACT: A better design of an electrolytic cell (as compared to those described by A. Mastachi, Nucl. Instr. and Meth., 1964, v. 26, no. 2, 219 and I. S. Stephen, ibid., p. 269) is suggested. U-tube 1 (see Fig. 1) houses Pt anode 2 and terminates with stainless-steel cathode 3; solenoid 4 produces a pulsating magnetic field for stirring the electrolyte. The radioactive isotope is deposited on substrate 5. The cell was used for preparing Mossbauer Co<sup>57</sup> sources; electrolyte composition and other data are reported. Fig. 1. Electro-  
Orig. art. has: 1 figure.

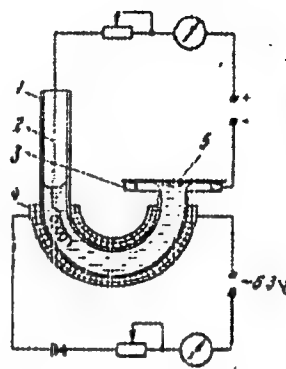


Fig. 1. Electro-  
[03] deposition cell

SUB CODE: <sup>18</sup>20, 09 / SUBM DATE: 20Apr65 / OTH REF: 003/ ATD PRESS: 5044

Card 1/1 *ell*

UIC: 621.039.554

SLIPCHENKO, P.S., glav. red.; KUCHERENKO, K.R., red.; FILONENKO, K.I., red.; LESNAYA, A.A., red.; ABYZOV, A.G., red.; BUDNIKOV, M.S., red.; VETROV, Yu.A., red.; GLADKIY, V.I., red.; GOLOSOV, V.A., red.; IZMAYLOV, V.G., red.; KANYUKA, N.S., red.; KAIPOV, E.A., red.; KLINDUKH, A.M., red.; KUSHNAREV, N.Ye., red.; LUYK, A.I. kand. tekhn. nauk, red.; NEMENKO, L.A., red.; RYBAL'SKIY, V.I., red.; SITNIK, I.P., red.; FEDOSFENKO, N.M., red.; FILAKHTOV, A.L., kand. tekhn. nauk, red.; KHILOBOCHENKO, K.S., red.; VORONKOVA, L.V., red.; KIYANICHENKO, N.S., red.

[Construction industry: technology and mechanization of the construction industry; the economics and organization of construction] Stroitel'noe proizvodstvo: tekhnologiya i mekhanizatsiya stroitel'nogo proizvodstva; ekonomika i organizatsiya stroitel'stva. Kiev, Budivel'nyk, 1965. 180 p. (MIRA 18:4)

1. Nauchno-issledovatel'skiy institut stroitel'nogo proizvodstva. 2. Nauchno-issledovatel'skiy institut stroitel'nogo proizvodstva (for Luyk, Filakhtov).

BAIROV, G.A., kand.med.nauk; KAIPOV, F.I.

Late results of surgical treatment of recent fractures in children.  
Ortop.travm.i protez. 20 no.4:24-29 Ap '59. (MIRA 13:4)

1. Iz kafedry khirurgii detskogo vozrasta (i.o. zav. - kand.med.  
nauk G.V. Chistovich) Leningradskogo pediatricheskogo meditsinskogo  
instituta (dir. - prof. N.T. Shutova).

(FRACTURES, surg.

of recent fract. in child, remote results (Rus))

KAPOV, F.I.

Late results of the treatment of necrotic phlegmons in newborn  
infants. *Pediatrics* 38 no.10:79-81 O '60. (MIRA 13:11)

1. Iz kliniki khirurgii detskogo vozrasta (avv. - doktor med.nauk  
S.Ya. Doletskiy) Leningradskogo pediatricheskogo meditsinskogo  
instituta (dir. - prof. N.T. Shutova).  
(PHLEGMON) (INFANTS (NEWBORN).....DISEASES)



KAIPOV, F. I.; VOL'FBERG, Ye. D.

Phlegmon in newborn infants. Khirurgiya no.6:28-33 Je '62.  
(MIRA 15:7)

1. Iz kafedry khirurgii detskogo vozrasta (zav. - doktor meditsinskikh nauk G. A. Bairov) i kafedry patologicheskoy anatomii (zav. - prof. V. G. Chudakov) Leningradskogo pediatri- cheskogo meditsinskogo instituta.

(INFANTS(NEWBORN)—DISEASES) (PHLEGMON)

KAPOV, F.I.; SHAMIS, A.Ya.

Problem of the choice of a method for replacing defective skin  
in newborn infants. Zdravookhraneniye 6 no.1:41-44 J-F'63.  
(MIRA 16:8)

1. Iz kliniki khirurgii detskogo vozrasta (zav. - doktor med.  
nauk G.A.Bairov) Leningradskogo pediatricheskogo meditsin-  
skogo instituta.

(SKIN GRAFTING) (INFANTS (NEWBORN))--SURGERY)

KAPOV, M.R.; RUDOVSKIY, D.G.

Experience in building and using an unheated water pipeline laid  
on a trestle. Vod.i san.tekh. no.9:31-32 D '55. (MLRA 9:3)  
(Water pipes)

KAISOV, M.R., kand. tekhn. nauk

Reusable flange for sheathing water pipes. Bul. stroi. tekhn. 12  
no.6:12 Jo '55. (MIRA 11:12)  
(Pipe flanges)

КАИРОВ, М.Р., канд. техн. наук; ЧИЖЕВATSKIY, М.Л., инж.

Constructing suction pipes in water intake installations.  
Bul.stroi.tekh. 12 no.10:17 0 '55. (MIRA 12:1)

1. Vostoktransspetsstroy.  
(Water pipes) (Water-supply engineering)

KAIPOV, R.L.; ZIV, D.M.; LEYPUNSKAYA, D.I.; SAVOSIN, S.I.; FEDOROV, V.V.;  
FRADKIN, G.M.; SHIMELEVICH, Yu.S.; BASIN, Ya.N.; KUKHARENKO, N.K.;  
SHESTAKOV, B.I.

Use of Ac - Be neutron sources in industrial geophysics. Atom energ.  
16 no.3:269-270 Mr '64. (MIRA 17:3)

KAIPOVA, N., inzh. po tekhnicheskoy informatsii

Mechanization of the pumping out of lubricants from the spindle  
seats of spinning and twisting machines. Tekst. prom. 23 no.6:78  
Je '63. (MIRA 16:7)

1. Tashkentskiy tekstil'nyy kombinat.  
(Spinning machinery---Maintenance and repair)

STOROZHENKO, V.N.; KAIPOVA, N.G., inzh. po tekhnicheskoy informatsii

Double-layer elastic rubber coatings. Tekst. prom. 23 no.9:  
52-53 S '63. (MIRA 16:10)

1. Nachal'nik otdela rezino-tekhnicheskikh izdeliy Tashkentskogo  
tekstil'nogo kombinata (for Storozhenko). 2. Tashkentskiy  
tekstil'nyy kombinat (for Kaipova).  
(Spinning machinery) (Rubber coatings)



PIVKINA, A.M.; KALPOVA, N.G., *Imennoye po tekhnicheskoy informatsii*

Scientific and technical conference at the Tashkent Textile Combine. Tekst. prom. 25 no.7:82-83 31 '65. (MIRA 18:8)

1. Nachal'nik tekhnicheskogo otdela Tashkentskogo tekstil'nogo kombinata (for Pivkina). 2. Tashkentkiy tekstil'nyy kombinat (for Kalpova).

KALPOVA, N.G., inzh. po tekhnicheskoy informatsii

Stearin treatment of warp. Tekst. prom. 24 no.7:55-56 J1 '64.

(MIRA 17:10)

1. Tashkentskiy tekstil'nyy kombinat.

KAIPOVA, Z.A.

Radiological observations on the dynamics of changes in the bones and soft tissues of the lower extremities in the early convalescent period of poliomyelitis. Med. zhur. Uzb. no. 2:24-27 F '61.

(MIRA 14:2)

1. Iz Uzbekskogo nauchno-issledovatel'skogo instituta rentgenologii, radiologii i onkologii (direktor - prof. D.M. Abdurasulov) i Tashkentskoy detskoy bol'nitsy No. 4 (glavnyy vrach - G.A. Zakar'yants).

(POLIOMYELITIS) (EXTREMITIES, LOWER—RADIOGRAPHY)

VASIL'CHENKO, R.S.; BULEKBAYEVA, L.B.; KAIPOVA, Z.M.; VASIL'YEVA, Ye.N.

Lymph circulation changes and some biochemical ingredients of  
lymph in passive movement of animal extremities. Izv. AN Kazakh.  
SSR. Ser. med. i fiziol. no.2:6-10 '59 (MIRA 13:3)  
(LYMPH) (EXERCISE)

KAIPOVA, Z.N.

Protein content and protein coefficient of blood serum in some  
vertebrates. Izv. AN Kazakh. SSR, Ser. med. i fiziol. no.2:  
44-49 '59 (MIRA 13:3)  
(BLOOD PROTEINS)

POLOSUKHINA, T.Ya.; ~~MAIPOVA~~, Z.N.

Cholesterol, fatty acids, and ketone bodies of the blood in domestic  
and wild animals. Izv. AN Kazakh. SSR. Ser. med. i fiziol.  
no. 1:41-46 '60. (MIRA 13:10)  
(CHOLESTEROL) (ACIDS, FATTY) (BLOOD—ANALYSIS AND CHEMISTRY)

GAIPOVA, M.S., VADKOVA, M.S., DOKHOVA, A.I., KURCHIKOVA, M.I., PAVLIN, Z.A.,  
KESHCHENIKOVA, M.I., SULAYEVA, L.S., UTESHEV, A.B., VAKHOLEICH, F.A.,  
POLOSUKHINA, T.YA., (USSR)

"Special Aspects of the Metabolism of Some Substance in  
Radiation Disease in Dogs."

Report presented at the 5th Int'l. Biochemistry Congress, Moscow,  
10-16 Aug 1961.

VASIL'CHENKO, R.S.; BULEKBAYEVA, L.E.; KAIPOVA, Z.N.; VASIL'YEVA, Ye.N.

Changes in the lymph flow and some biochemical lymph components  
following the stimulation of the vagus nerve. Report No.3. Izv.  
An Kazakh. SSR. Ser. med. i fiziol. no.1:11-15 '61. (MIRA 15:4)  
(LYMPH) (VAGUS NERVE)



VASIL'CHENKO, R.S.; BULEKDAYEVA, L.E.; KAIPOVA, Z.N.; VASIL'YEVA, Ye.N.

Changes in the lymph flow and some biochemical lymph components  
following the stimulation of the sciatic nerve and sinocarotid zone.  
Report No.2. Izv. AN Kazakh. SSR. Ser. med. i fiziol. no.1:3-10 '61.

(MIRA 15:4)

(LYMPH)

(SCIATIC NERVE)

(CAROTID SINUS)

POLOSUKHINA, T.Ya.; VALITOVA, M.S.; DYAKOVA, A.L.; KAIPOVA, Z.N.; KURCVSKAYA,  
N.I.; RESHETNIKOVA, M.I.; SULAYEVA, L.S.

Effect of X rays on lipid metabolism in the dog liver. Vop. med.  
khim. i no.2:192-199 Mr-Apr '62. (MIRA 15:4)

1. Chair of Biological Chemistry, Kazakh State Medical School,  
Alma-Ata.

(LIVER) (LIPID METABOLISM) (X RAYS--PHYSIOLOGICAL EFFECT)

VERBOLOVICH, Petr Alekseyevich; POLOSUKHINA, Tat'yana Yakovlevna;  
KAIPOVA, Zoya Nikolayevna; MAKEYEV, Aleksandr Fedorovich;  
GOLODOVA, Lidiya Semenovna; POGOZHEV, A.S., red.;  
ROROKINA, Z.P., tekhn. red.

[Laboratory work in organic, physical, colloid, and biological  
chemistry] Praktikum po organicheskoi, fizicheskoi, kolloidnoi  
i biologicheskoi khimii. Alma-Ata, Izd-vo Akad. nauk Kazakh-  
skoi SSR, 1963. 345 p. (MIRA 16:6)  
(CHEMISTRY, MEDICAL AND PHARMACEUTICAL--LABORATORY MANUALS)

VASIL'CHENKO, R.S.; BULEKBAYEVA, L.E.; KAPOVA, Z.N.; VASIL'YEVA, Ye.N.

Mechanism of changes in the lymph circulation induced by stimulation of the mechanoreceptors of organs of the gastrointestinal tract. Izv. AN Kazakh. SSR Ser. med. nauk no.2: 3-12'63.

(MIRA 16:10)

(LYMPHATICS) (ALIMENTARY CANAL — INNervation)

KAIPOVA, Z.N.

Metabolism in experimental silicosis. Report No.1: Glutathione  
and ascorbic acid in experimental silicosis. Izv. AN Kazakh.  
SSR Ser. med. nauk no.2:30-35'63. (MIRA 16:10)  
(LUNGS — DUST DISEASES) (ASCORBIC ACID)  
(GLUTATHIONE)

KAIPOVA, Z.N.

Metabolism in silicosis. Izv. AN Kazakh. SSR. Ser. med. nauk  
no.3:17-19 '63. (MIRA 17:1)

VASIL'CHENKO, R.S.; BULEKBAYEVA, L.E.; KAIFOVA, Z.N.; VASIL'YEVA, Ye.N.

Changes in the lymph circulation and some biochemical lymphatic  
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Report No. 5. Izv. AN Kazakh. SSR. Ser. med. nauk no.1:12-14 '63.  
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VASIL'CHENKO, R.S.; BULEKBAYEVA, L.E.; KAIPOVA, Z.N.; VASIL'YEVA, Ye.N.

Mechanism of the change in lymph circulation due to the stimulation of the receptors of the emunctory organs. Izv. AN Kazakh. SSR. Ser. med. nauk no.1:16-24 '64 (MIRA 17:7)



EXCERPTA MEDICA Sec 17 Vol 5/3 Public Health Mar 59

1008. THE CLINICAL PICTURE AND PATHOLOGY OF BAKELITE LACQUER  
POISONING (Russian text) - Kaira F. M. - KLIN. MED. (Mosk.) 1958,  
36/3 (130-135) Tables 1

Bakelite is poisonous due to emanation of phenol. Acute poisoning may be fatal  
within 1-2 hr. from asphyxia. Survivors recover in a short time with no sequelae.  
The histories of 12 young men are reported who took a filtrate of (somewhat  
cleansed) bakelite lacquer (containing methanol) to get drunk (one for the second  
time). Three died.

(VI, 17)

1. Inzh. M.I. Potapov, V.I.

Work practices of a gas rescue station. Bezop. truda v prom.  
8 no.12:41-42 D '64. (MIRA 18:3)

1. Master gazosnasatel'noy stantsii Magnitogorskogo metallurgicheskogo kombinata (for Kaira). 2. Inzhener-inspektor Magnitogorskoy rayonnoy gornotekhnicheskoy inspeksii (for Potapov).

ZUPAKOV, S.M.; KAIRBAYEVA, Z.K.

Thermographic investigation of chromite ores from the Kimpersay  
massif. Izv.AN Kazakh.SSR.Ser.met., obog.i ognep. no.1:73-83 '61.  
(MIRA 14:6)

(Aktyubinsk Province--Chromite) (Thermal analysis)

GOL'DMAN, M.M.; POKHAROV, V.D.; GANIN, V.I.; KAZAKOVA, T.P.; KAIRBAYEVA,  
Z.K.

Role of potassium in the leaching of nepheline rocks. Trudy  
Inst. met. i obog. AN Kazakh. SSR 8:72-76 '65 (MIRA 17:8)

BUVALKINA, L.A.; KAIRGALIYEVA, A.; SOKOL'SKIY, D.V.

Natural aluminum silicates of some Kazakhstan deposits as  
catalysts in cracking reactions. Vest.AN Kazakh, SSR 12 no.12:  
13-23 D '56. (MIRA 10:2)

(Aluminum silicates) (Cracking process)

Several Kazakhstan clays are effective cracking catalysts, suitable for  
the production of gasoline from petroleum fractions. Addn. of #102 usually  
depresses the catalytic activity of the natural products.

ACC NR: AP6032953

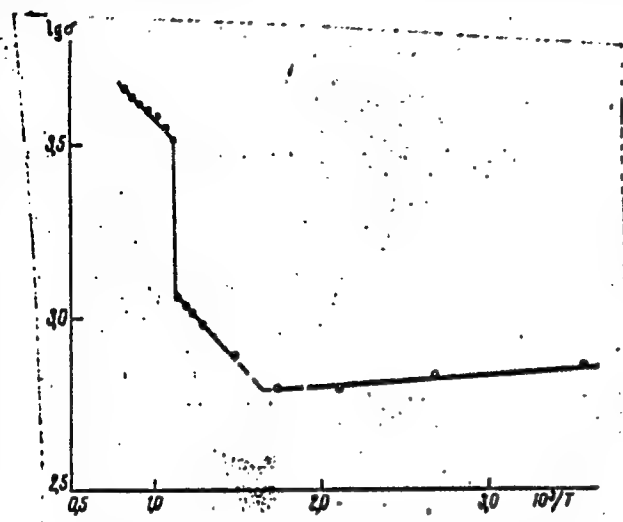


Fig. 1.  $\text{CdSnAs}_2$  conductivity

state. The width of the forbidden-zone, calculated from the slope of the conductivity curve, amounts to 0.20 ev. Orig. art. has: 2 figures.

SUB CODE: 11/ SUBM DATE: 10Dec65/ ORIG REF: 008/ OTH REF: 003/

Card 2/2

*KAIRIUKSTIS, L.*

USSR/Forestry - Forest Cultures.

K.

Abs Jour : Ref Zhur - Biol., No 21, 1958, 95845

Author : Kairiukstis, L.

Inst : -

Title : On the Cultivation of Green Pseudo-Tsuga.

Orig Pub : Soc. Zemes ukis, 1957, No 3, 41-43

Abstract : A plantation is described of green pseudo-tsuga set in 1939 in the Shilutskiy Leskhoz on average podzolic sands with occurrence of ground water at a depth of 1.5 m. The planting was placed in plots 35 x 35 cm under a canopy of 17-year-old sparse birch groves with young spruce stock. The plots were not cultivated and hole planting was used. The greatest average height and diameter of the trees were observed in pure the birch grove with sparse spruce young stock, the least - in the birch grove with a significant admixture of spruce. Pseudo-tsuga plantings are recommended in the forests of the western and south-

Card 1/2

*KAIRLUKSTIS, L.*

KAIRLUKSTIS, L.

Experimental sectors in forest districts. p. 41

MUSU GIRIOS (Mislų ūkio ir miško pramonės ministerija ir Gamtos apsaugos komitetas prie ministrų tarybos)

Vol. 8, Aug. 1959

Vilnius, Poland

Monthly List of East European Accession (EEAI) LC, Vol. 9, no.1, Jan. 1960

Uncl.



KAIRIUKSTIS, T.

Effect of Neobenzol on general resistance of the organism to  
Mercusal poisoning. Sveik. apsaug. no.7:41-45 '62.

1. LTSR MA Eksperimentines medicinos institutas.  
(ALLERGY) (HYDROCARBONS) (DIURETICS MERCURIAL)

KAIRIUKSTIS, T., med.m.kand.

Current concepts of the basis of allergy and rheumatism. Sveik.  
apsaug:40-47 Mr '63.

1. LTSR MA Eksperimentines medicinos institutas.

NESMEYANOV, A.N., akad.; KAIROV, I.; PAVLOV, Todor, akad.; LOBANOV, P.,  
akad.

To the youth. Nauka i tekhnika mladezh no.7:1-2 '57.

1. Predsedatel na Akademiata na naukite na SSSR (for Nesmeyanov).
2. Predsedatel na Akademiata na pedagogicheskite nauki v RSFSR (for Kairov).
3. Predsedatel na Bulgarskata akademiia na naukite (for Pavlov).
4. Predsedatel na Akademiata na sel'skостopanskite nauki "V.I. Lenin" (for Lobanov).

NESMEYANOV, A.N.; LOBANOV, P.P.; BAKULEV, A.N., laureat Leninskoy premii;  
BEKHTIN, N.V.; KAIROV, I.A.

Presidents of five academies greet you. Tekh. mol. 25 no.7:2-3  
Jl '57. (MLBA 10:8)

1. Prezident Akademii nauk SSSR (for Nesmeyanov). 2. Prezident  
Vsesoyuznoy Akademii sel'skokhozyaystvennykh nauk iuzeni V.I.  
Lenina (for Lobanov). 3. Prezident Akademii meditsinskikh nauk  
SSSR (for Bakulev). 4. Prezident Akademii pedagogicheskikh nauk  
RSFSR (for Kairov). 5. Prezident Akademii stroitel'stva i arkhitektury SSSR (for Bekhtin).

(Youth---Congresses)

AFANASENKO, Ye.A.; KAIROV, I.; VINOGRADOV, N.

Organization of housekeeping chores in general schools, boarding schools, and orphanages. Gig. i san. 25 no. 6:111-114, Je '60.  
(MIRA 1412)

1. Ministr prosveshcheniya RSFSR (for Afanasenko). 2. Prezident Akademii pedagogicheskikh nauk (for Kairov). 3. Ministr zdravookhraneniya RSFSR (for Vinogradov).  
(STUDENT ACTIVITIES)

KAIROV, Ivan Andreyevich

Our school's today and tomorrow. Zdorov'e no.9:2-3 S '62.  
(MIRA 15:9)

1. Prezident Akademii pedagogicheskikh nauk RSFSR.  
(SCHOOL HYGIENE)

KAIROV, I.Kh.

Natural focus of trichinosis in Uzbekistan. Med. paraz. i parazit.  
bol. 34 no.3:353 My-Je '65. (MIRA 18:7)

KAIROVA, G.

Training specialists in labor organization and establishment of  
work standards in the Federal Republic of Germany (REFA system).  
Biul.nauch. inform.:trud 1 zar. plata 4 no.4:64-68 '61.  
(MIRA 14:6)

(Germany, West--Production standards)  
(Germany, West--Industrial management)



KATRYUKSHITENE, V. and SERGEYEV, A.

"Conference-Seminar on the control of dermatomycosis."

Veterinariya, Vol. 38, No. 4, 1961.

KAISER, Albert

What is the situation in the Research Institute for Organic  
Chemical Industry? Ujit lap 16 no.8:4 25 Ap'64

1. Szerves Vegyipari Kutatóintézet kutatási titkarság  
vezetője.

KAISER, E.

Pituitary changes after atrophy. *Gyermekgyógyászat* 4 no.6:176-179  
June 1953. (CML 25:1)

1. Institute of Anatomy (Director -- Prof. Dr. Janos Szentagothai) and  
Children's Clinic (Director -- Prof. Dr. Odon Kerpel-Fronius), Pecs  
Medical University.

FULOP, Tibor, dr.,; KAISER, Eva, dr.

Studies on nuclear volume in infantile atrophy. Orv. hetil. 97  
no.24:658-662 10 June 56.

1. A Pecséi Orvostud. Egyetem Gyermekklin. (igaz.: Kerpel-Fronius  
Odon dr. egyet. tanar) közl.

(INFANT NUTRITION DISORDERS, physiol.

changes in weight of endocrine glands in atrophies,  
determ. of cell nucleus volume of glands (Hun))

(ENDOCRINE GLANDS, in various dis.

infantile atrophies, changes in weight & determ. of cell  
nucleus volume (Hun))

KAISER, Eva, F., Dr.; BODO, Tibor, Dr.; GYENQESI, Laszlo, Dr.

Observations on epidemic hepatitis in infancy and childhood. Orv. hetil.  
99 no.45:1573-1575 9 Nov 58.

1. A Pecsí Orvostudományi Egyetem Gyermekklinikaának (igazgató: Kerpel-  
Fronius Odon dr. egyet tanár) közleménye.  
(HEPATITIS, INFECTIOUS, in inf. & child  
clin. statist. (Hun))

KAISER, Eva, dr.

Observations on intoxications in infants and children. Orv. hetil.  
103 no.12:545-548 25 Mr '62.

1. Pécsi Orvostudományi Egyetem, Gyermekklinika.

(POISONING in inf & child)

KOLLAR, Dezso, dr.; FULOP, Tibor, dr.; KAISER, Eva, dr.

Clinical significance of suppurative maxillary sinusitis in  
infancy. Orv. hetil. 105 no.19:834-836 3 My'64

1. Pecsí Orvostudományi Egyetem, Gyermekklinika

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FULOP, Tibor, dr.; KAISER, Eva, dr.; FARKAS, Gabor, dr.

Treatment of hypsarrhythmia associated with flexor spasm  
with ACTH and prednisolone. Orv. hetil. 105 no.11:497-500  
15 Mr.'64.

✓ 1. Pesci Orvostudományi Egyetem, Gyermekklinika (igazgató:  
Kerpel-Fronius Odon, dr.)

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JANOSFY, K.; KAISER, E.; TAMBA, M.; VUKOV, Konstantin

Quality inspection of sugar beets at their receiving from the socialist sector of agriculture. Cukor 12 no.11:290-296 M '59.

1. Cukoripari Muszaki Tanacs munkabizottsaga. 2. "Cukoripar" szerkeszto bizottsagi tagja (for Vukov).

Glycemia .....  
cides the fate of the decompensated cases of enteritis. In the management  
of these cases, the continuous control of the pH in immature infants and of  
the blood sugar in the atrophied ones is of great importance. All 20 refer-

APPROVED FOR RELEASE: 08/10/2001

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BALAZS, Jozsef; KAISER, Ferenc

Tasks and methods of practical industrial organization. Munka  
szemle 6 no.12:23-27 D '62.

BALAZS, Jozsef; KAISER, Ferenc

Tasks and methods of practical industrial organization; experiences  
of the Lorinc Spinning Works. (To be contd.). Munka szemle 6 no.11:  
10-13 N '62.

KAISER, G.

"Designs for housing construction in Sweden." p. 214.

STAVBA. (POVERENICTVO STAVEBNICKTVA). Bratislava, Czechoslovakia, Vol. 6, no. 7,  
July 1959.

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Uncl.